

IN THE CLAIMS

1. (Currently amended) A method of simulating the operation of ~~an electronic system~~ at least one switch fabric comprising a plurality of ~~circuit elements~~ integrated circuits, utilizing a software-based development tool, the method comprising the steps of:

providing in the software-based development tool an interface permitting user control of one or more configurable parameters of the ~~electronic system~~ switch fabric; and

automatically generating a simulation configuration for the ~~electronic system~~ switch fabric based on current values of the configurable parameters;

the simulation configuration being generated without requiring further user input;

the simulation configuration specifying interconnections between the ~~circuit elements~~ integrated circuits which satisfy the current values of the configurable parameters.

2. (Cancelled)

3. (Currently amended) The method of claim 1 wherein the ~~electronic system~~ at least one switch fabric comprises at least one multistage switch fabric.

4. (Currently amended) The method of claim 3 wherein the ~~circuit elements~~ integrated circuits comprise at least two ingress devices, at least one cross-connect device and at least two egress devices.

5. (Currently amended) The method of claim 1 wherein the ~~circuit elements~~ integrated circuits comprise integrated circuits of a designated chip set utilizable in the ~~electronic system~~ switch fabric.

6. (Currently amended) The method of claim 1 wherein the interface includes a listing of the ~~circuit elements~~ integrated circuits and permits user control of one or more configurable parameters of each of the ~~circuit elements~~ integrated circuits.

7. (Currently amended) The method of claim 1 wherein the interface includes a listing of a base device specified for the plurality of ~~circuit elements~~ integrated circuits and permits user control of one or more configurable parameters of the base device.

8. (Currently amended) The method of claim 1 wherein the configurable parameters comprise a switching capacity of the ~~electronic system~~ switch fabric.

9. (Currently amended) The method of claim 1 wherein the configurable parameters comprise a configuration type of the ~~electronic system~~ switch fabric.

10. (Currently amended) The method of claim [[9]] 1 wherein the ~~user~~ interface permits user selection of one of a centralized configuration, a stackable configuration and a distributed configuration for a ~~multistage switch fabric of the electronic system~~ the switch fabric.

11. (Currently amended) The method of claim 1 wherein the configurable parameters comprise a number of ports of the ~~electronic system~~ switch fabric.

12. (Currently amended) The method of claim 1 wherein the software-based development tool comprises an automatic configuration generation module which generates the simulation configuration for the ~~electronic system~~ switch fabric based on the current values of the configurable parameters.

13. (Currently amended) The method of claim 1 wherein the simulation configuration is generated utilizing an object-oriented programming construct comprising a base class, corresponding to a base device specified for the plurality of ~~circuit elements~~ integrated circuits, and an associated generation interface.

14. (Currently amended) The method of claim 13 wherein the generation interface declares a generate function that is implemented by each of a plurality of generators, each of the plurality of generators corresponding to a different configuration of the ~~electronic system~~ switch fabric.

15. (Currently amended) The method of claim 14 wherein the plurality of generators comprises a centralized configuration generator, a stackable configuration generator and a distributed configuration generator, corresponding to respective centralized, stackable and distributed configurations of ~~a multistage switch fabric of the electronic system~~ switch fabric.

16. (Original) The method of claim 1 wherein the software-based development tool runs at least in part on an information processing device comprising a processor and an associated memory.

17. (Currently amended) The method of claim 1 wherein the software-based development tool comprises a simulator control module, a set of interfaces, and circuit element modules each corresponding to an associated one of the ~~circuit elements~~ integrated circuits.

18. (Currently amended) An apparatus for simulating the operation of ~~an electronic system~~ at least one switch fabric comprising a plurality of ~~circuit elements~~ integrated circuits, the apparatus comprising:

an information processing device having a processor and a memory;

the information processing device implementing a software-based development tool providing an interface permitting user control of one or more configurable parameters of the ~~electronic system~~ switch fabric, the development tool being operative to automatically generate a simulation configuration for the ~~electronic system~~ switch fabric based on current values of the configurable parameters;

the simulation configuration being generated without requiring further user input;

the simulation configuration specifying interconnections between the ~~circuit elements~~ integrated circuits which satisfy the current values of the configurable parameters.

19. (Currently amended) An article of manufacture comprising a storage medium containing one or more software programs for use in simulating the operation of ~~an electronic system~~ at least one switch fabric comprising a plurality of ~~circuit elements~~ integrated circuits.

utilizing a software-based development tool, wherein the one or more software programs when executed implement the steps of:

providing in the software-based development tool an interface permitting user control of one or more configurable parameters of the ~~electronic-system~~ switch fabric; and

automatically generating a simulation configuration for the ~~electronic-system~~ switch fabric based on current values of the configurable parameters;

the simulation configuration being generated without requiring further user input;

the simulation configuration specifying interconnections between the ~~circuit elements~~ integrated circuits which satisfy the current values of the configurable parameters.